

ABSTRACT

An apparatus for forming a fiber from a biocompatible biopolymer includes a fiber-formation tube that defines a bore extending generally vertically from an upper end to a lower end. Coagulation fluid enters the tube through a fluid inlet coupled to its upper end and establishes a laminar flow of coagulation fluid within the tube. A spinneret introduces a stream of liquid biopolymer into the laminar flow of coagulation fluid so that the stream is surrounded and swept downstream by the coagulation fluid as it coagulates into a biopolymer fiber. The laminar flow of coagulation fluid surrounding the biopolymer stream maintains the shape of the stream so that the resulting fiber is homogeneous in both geometry and structure. The laminar flow of coagulation fluid also prevents the resulting fiber from contacting the inner wall of the fiber-formation tube.